atari/club med music curriculum
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YOUR COMPUTER CAN BECOME:

I) A machine that produces various musical SOUNDS

II) A machine that reads and plays from musical NOTATION

III) A machine that generates interesting musical PATTERNS

ITS FUNCTION RESEMBLES:

I) Musical instruments

II) Performer, Score

III) Composer, Improviser

WHAT MAKES IT WORK?

I) Signals and Circuits

II) Symbols and Codes

III) Choice Systems, Sets, Arrays

HOW CAN WE CONTROL IT?

I) Put numeric values into registers that feed the POKEY chip, using dial, joystick, etc.
Use computer's keyboard to input values, simulating a keyboard instrument.
SOUND and POKE commands in BASIC; TOOT and SETENV commands in Atari Logo.

II) Translate standard staff notation into a linear sequence of letters and numbers.
Write numeric values into memory locations, to be read by playback routines (see I).

III) Write programs to detect and rebuild patterns in strings of notes.
Construct hierarchies, libraries, and systems, with patterns and their variants.
Feed values into pattern variables and decision matrices.
Translate (see II) and play back (see I) resulting musical structures.

HOW CAN WE SEE IT WORK?

I) Screen windows to show control values for static functions.
Graphs to display series of changing values for dynamic functions.

II) Simulate a score being "read" or a piano being "played", synchronized with playback.
(Other methods, more helpful to the listener, have rarely been tried.)

III) Graphic input and display of pattern elements.
Menu of pattern operations. Catalog of available patterns.

EXAMPLES OF THIS APPROACH?

I) MUSIC LESSONS and PLAYER PIANO (Swifty)*. Various POKEY demo programs.

II) MUSIC COMPOSER (Atari)*. ADVANCED MUSIC SYSTEM (APX).

III) MAGIC MUSIC BOX (APX)*. RUMDRUMS (APX-advance copy)*.

overview

3 APPROACHES TO MUSIC . . . TO SOFTWARE . . . and TO MUSIC SOFTWARE.

* recommended for children

> The beauty of a living thing is not in the atoms that go into it, but in the ways they are put together.
>
> -- Carl Sagan

What can computers do for music? A great deal -- or nothing -- depending on your point of view. Let's start by comparing three different viewpoints, three ways to become actively involved with a computer for musical purposes. As it happens, the three ways correspond roughly to three kinds of music software being marketed today. They also represent three contrasting approaches to music itself, all of which deserve some attention. So viewed, our "music curriculum" becomes a kind of test case: Can computers help us deal with a rich and complex domain of human activity -- if possible without trivializing it, but within the limits imposed by today's small home machines? (See Overview for a summary of the 3 categories.)

For this summer's computer music workshops, you will have examples of all three approaches to music software design in your kit. And we encourage you to use them as you see fit. You may choose to begin by surveying all three approaches, illustrating each by a short demonstration or hands-on session. Or you may devote more time to exploring one particular approach that fits the interests and the background of your group.

To many of you, the programs in categories I and II will seem most familiar and easiest to handle. But both assume a good deal of prior knowledge or skill. The approaches in category I will, for example, presuppose some acquaintance with machine-level programming, or an interest in electronic circuitry and sound production. For those in category II, some training in reading and writing standard staff notation is almost a must.

Category III is probably the best hope for the complete beginner, the curious listener who is neither a programmer nor a sightreader, and who needs the computer's aid to have any chance at a firsthand creative experience with written music. For these people, it is at least conceivable that their computer-assisted music-making might open the way to new understanding of the essential ideas and methods that make possible any serious programming task, musical or otherwise.

Unfortunately, good software in category III is not easy to write, and there is very little of it around. To remedy this lack, we have prepared a special system for ATARI/CLUB MED, called RUMDRUMS. A rhythmic exercise for novice composers, RUMDRUMS also highlights the problems facing any music system designer.

As you start to work with the RUMDRUMS package, here are a few points to bear in mind:

1) RUMDRUMS is about rhythms -- music's most captivating and memorable pattern element. Yet learning-tools that let you play with rhythmic patterns have always been remarkably scarce. We hope we have started something here! But remember that the rhythmic possibilities we are opening up for exploration here represent only a small and (deliberately) limited corner of a much wider musical universe. What is surprising is how much can be done with so little, even by beginners. To hear what a real artist can do with much the same basic materials, we need search no further than the very part of the world where this Club Med is located. As an added resource, we are trying to make sure that you and your people at the Club will have access to some taped -- hopefully also live -- performances of percussion ensemble music from the Caribbean and Africa. This should give a new dimension of meaning to our simple-minded computer experiments.

2) RUMDRUMS does use notation -- though not the standard kind. Reading traditional staff notation is a hurdle that has discouraged many kids from further attempts to make their own music, and kept many music-teachers off the welfare rolls. Often it takes years of drudgery to master fully. But the special letter-code we use to input rhythm patterns can be learned in a few minutes by anyone, even a musical illiterate. What's more, it is designed to be SPOKEN, not only written -- so you can easily try out your pattern and hear how it will sound BEFORE you type it in. (This is one way we can try to link the cold, silent precision of computer power with the vibrant physicality of live human music-making.) When using the code, try speaking the word "one" loudly, "oh" in a lower voice, and "dot" only after hesitating half a count. Encourage people to PERFORM their rhythms vocally, reading then from catalog listings after entry, or reciting them before giving them to the computer to play. Who knows -- they may soon find their own brand of "talking drums", swapping rhythms back and forth or building complex patterns with many layers at once, even more fun than running RUMDRUMS on the Atari -- an outcome I for one would certainly cheer.

3) RUMDRUMS offers handles -- such as "range" and "length of patterns" for the tune -- that can be set by each user within a narrow range of options, with immediately audible consequences for the music being generated. (Or they can be ignored, letting built-in default values take over.) It is not hard to get some pretty complex patterns going in RUMDRUMS. The whole package, in fact, is meant to encourage people to think HIERARCHICALLY about both rhythm and melody -- that is, to build patterns of patterns of patterns. By helping you add a semi-random TUNE

to the rhythmic sequence you have created, it also lets you in on the great fun composers and improvisers have always had in SUPERIMPOSING one kind of pattern (say, a tune) on another (say, a drum rhythm) that doesn't QUITE coincide, in length or structure, with the first. Here is where having a handle on the LENGTH of the patterns you generate and combine is most helpful. Need I say more?

4) In fact, RUMDRUMS is actually TWO packages of music-making programs rolled into one. The idea is that we first build a series of compatible rhythmic phrases, using the procedures in the file DRUMIT. Sticking to a common length, such as 8 characters per phrase, is recommended, to make combining and substituting phrases easier to manage when building longer sequences. Phrases half or twice the common length can also be useful. People should be encouraged to exploit possibilities for interesting recurring figures, etc., even within a single rhythm-word, and to choose patterns that bear repetition well. The second stage is to compose extended sequences of rhythm-words, using DRUM to try out various combinations of the rhythms already saved in the catalog. Finally, using the procedures in the file TUNER, a tune can be generated and superimposed on whichever long sequence was most recently played. Various tunes can be tried with the same underlying rhythm sequence, until we get a melodic version that deserves keeping. (You may then type KEEP to save it on disk.)

5) RUMDRUMS is written in Atari Logo. This means that it is definitely NOT another one of those "black box" programs -- though at first it may seem like one. Instead, it is written to be CHANGED and EXTENDED by and for its users, just like Logo itself. As a quick listing of the RUMDRUMS workspace will reveal, Logo encourages a profusion of short, modular programs, or procedures; often such a program will end with a recursive call to reinvoke the program itself. After only a few days' acquaintance with Logo, one is tempted to tinker with one or more of these little modules, so as to improve some aspect of the whole system, or add some wrinkle not yet thought of by its author. Be my guest! At this point, one may well begin to wonder whether RUMDRUMS is teaching us more about programming than about music -- but do we care, as long as it's got us involved? In fact, the key pattern-generating variables in either section (DRUMIT or TUNER) are deliberately written so as to be accessible for tinkering by the curious. Other people, however, will be content to USE their new-found music-making power to build ever more intricate musical structures, and will be grateful for the automatic features already built into the RUMDRUMS system.

Summary of RUMDRUMS Logo Commands (Version 1.2)

LOAD "D:DRUMIT	Your first step, after Atari Logo and DOS have booted and welcomed you.
HELLO	To initialize RUMDRUMS and start your dialog.
TRY	To write and hear a new rhythm pattern. Use the four special characters to construct a single rhythm-word (no spaces).
SEE	To list all items saved (and automatically named) in the current rhythm catalog, for reference and comparison.
DRUM [RB RA RC etc.]	To play items from your rhythm catalog, by name, in any sequence.
A	To replay the rhythm or tune just heard. May be typed repeatedly until RETURN is pressed.
MENU	To review the reminder of other options available.
LOAD "D:TUNER	Reads in the remainder of the RUMDRUMS package from disk. Need not be done until you are ready to add a tune to your sequence of DRUM rhythms.
TUNE	To generate a semi-random melody, which will then be superimposed on the most recently played DRUM sequence. (Longer rhythms make better tunes!)
KEEP	To save on disk a particularly memorable result of TUNE. You must supply filename (without "D:) under which it will be stored, and a special name for the completed tune. When that file is loaded later, you can play your saved tune simply by typing its name to Logo.

SOME SUGGESTED STRATEGIES FOR YOUR MUSIC + COMPUTER SESSIONS

1. INPUT METHODS COMPARED.

Explore the possibilities, and demonstrate the advantages of each, as an aid in choosing and entering: a) pitch relationships; b) time relationships; c) chords, etc.; d) other significant musical characteristics.

MMB	Joystick and step graph
AMS, MC	Alphanumeric equivalents of each symbol in staff-notated score
RD	Special letter code
PP	Computer keyboard, programmed to resemble arrangement of piano keys
MC	Mini-programs of instructions for each voice
ML	SOUND (Soundemo), POKE (Poksound), DATA (Songrite) statements in BASIC
(RD)	TOOT and SETENV statements in Atari Logo

2. COMPOSING BY DEFAULT, OR AT RANDOM.

How "creative" can a computer program be? By looking at and fiddling with the program listings, as well as by watching and hearing them run, try to figure out:

MMB	What does the program do with your graphic input to come up with its "composition"? How can we change its "style"?
RD	How do the various "handles" (inputs by the user) affect the musical result? How could they be made to work differently?

How would YOU design a composing system for the novice using a home computer? Which elements would you build in as constants? Which would you permit to be variables?

How much programmed control is too much, or too little, for the beginning composer? How different are the mental actions encouraged by computing systems from those of a creative person at work on a new piece of music?

3. PLAYING WITH, AND WITHOUT, DISPLAYS.

How useful is what we see on the screen in helping us control musical events? What kind of screen display would help us understand the music better, as we try to listen to it, or compose it? How might the screen be effectively used to ENTER and EDIT large-scale features of even a single-line composition?

PP	How helpful is piano-keyboard image, as a pitch-entry display,
AMS	or as a "playback" display of both pitch and timing?
NOISE	Can screen graphics help us control how sounds are generated?
RD	Or help us keep time?
MC	Is the answer some kind of pseudo-score-image, scrolling in synchronization with computer-controlled playback of the music it represents?

4. A DIFFERENT DRUM.

Compare 3 kinds of musical "technology": a) "Drumming" with RUMDRUMS; b) Synsonics electronic drum machine; c) A set of unelectrified conga drums. How does the experience of playing them differ? What does it take to make rhythmically interesting music with each? What are the pros and cons of each kind of "digital" control?

A LIST OF RESOURCES FOR EXPLORING COMPUTER MUSIC ON THE ATARI

A. SOFTWARE:

AMS — ADVANCED MUSICSYSTEM by Lee Actor (APX-20100)
Atari Program Exchange, P.O.Box 3705, Santa Clara CA 95055

MC — MUSIC COMPOSER by Atari Inc. (CXL-4007)

MUSIC PLAYER by James Bayless (APX-20181)
(to access MUSIC COMPOSER files from BASIC programs)

MMB — MAGIC MELODY BOX by Wes Horlacher (APX-20182)

ML — MUSIC LESSONS by Jerry White
Swifty Software, 64 Broadhollow Road, Melville NY 11746

NOISE — ROTBERG SYNTHESIZER PROGRAMS by Ed Rotberg (advance copy only)

PP — PLAYER PIANO by Jerry White
(included in Swifty Software package)

RD — RUMDRUMS by Sterling Beckwith
(advance copy for Atari/Club Med use only)

TT — TRICKY TUTORIAL No. 6: Sound and Music
Educational Software Inc., 4565 Cherryvale Ave., Soquel CA 95073

B. MAGAZINES:

ANTIC: The Atari Resource (see esp. OCT-NOV 82, I/4)

ANALOG Computing: The Magazine for Atari Computer Owners

COMPUTER MUSIC JOURNAL (quarterly, highly technical state-of-the-art stuff, pub. by MIT Press)

MUSIC EDUCATORS JOURNAL (occasional brief articles and ads)

CREATIVE COMPUTING, COMPUTE!, MICROCOMPUTING are worth checking regularly

In addition: several good books on computer music are now in the works, to supplement those already published by such authors as H. Chamberlin and W. Bateman, which do not deal specifically with musical possibilities of microcomputers for the novice. Watch for forthcoming titles by: F. Hofstetter, C. Roads, S. Beckwith.

Meanwhile: ATARI SOUND AND GRAPHICS by Herb Moore et al. is a useful starting-point. Published in paperback by John Wiley & Sons, 605 3rd Avenue, New York NY 10016.

Outstanding software for training in music fundamentals is now available, in the MUSIC I, II & III packages by MECC, and the ATARIMUSIC I & II package by Hofstetter, the former available from APX (APX-20139, 20172, 20161).

. Robert Kahn
Special Projects
Atari Inc.
Sunnyvale CA

Dear Bob,

It's been a great help to have all the goodies you have kindly sent. I've been doing my best to supplement them with any good third-party music software I can find for the Atari. But it has been a frustrating time, not very cheering to be unable to find more than a few bits and pieces that match my idea of what is needed for Club Med.

In particular, there is literally nothing that addresses the most immediately engaging aspect of music -- rhythm. My concept of how to do music as part of the Club Med experience includes, as you know, a special kind of active group music-making, side by side with computer music explorations. I'm now convinced that this combination is going to produce something valuable and unique, when we get all the elements together.

Meanwhile, the only solution I could see to the immediate need for workable stuff to train people on was to write some myself. It had to be simple, yet powerful enough to open many possibilities for exploring PATTERNS -- not just notes! -- to both kids and adults.

The result is on this disk: a new program, written especially for Atari/Club Med, called RUMDRUMS. It is designed to run in Atari Logo, even though I have yet to receive a complete or up-to-date version of the language. With Logo loaded, just type: LOAD "D:DRUM and LOAD "D:RUM -- then when files have loaded, type HELLO. The rest SHOULD be self-explanatory (though some of it is designed to need exploring before it becomes clear). Most of the questions asked by the program can be ignored the first time around.

I hope you find this as close in spirit to what we are looking for --

from your wizards in Sunnyvale! Specifically, someone who knows the hardware well should work on the TIMING of the sound playing routines. I haven't tried to tap in directly to VBLANK interrupts, but feel this MUST be done, and done right. Also, much can surely be done to avoid embarrassing hiccups in the playback. And someone else -- Dennis, perhaps? -- should work on improving the user dialog and display, insofar as this can be done in the Logo you've got.

There's nothing to stop someone from redoing the whole concept in BASIC, for that matter. But I suggest we wait until later to try that. Main thing is that we have SOMETHING to show and teach the counselors/G.O.s that does NOT require a degree in music to use!

Please allow for the haste involved, and let me know your reactions soon. Hope you agree it represent a good use of my consulting time, and is worth polishing up to meet our immediate needs. Let's hope I'm still reachable and at liberty when you reply -- working to finish even this much code has kept me from tackling the year's income tax returns!

With best regards to Dennis, Linda, and Ted,

BOB
Sterling Beckwith
P.O.Box 244
North Salem, N.Y.

RECEIVED
JUN 16 1983
SPECIAL PROJECTS

STERLING BECKWITH

MUSIC CONSULTANT

605 FINCH AVENUE WEST
WILLOWDALE ONTARIO CANADA

BOX 244 NORTH SALEM
NEW YORK U.S.A. 10560

RECEIVED
JUN 16 1983
SPECIAL PROJECTS

12 June 1983

Dr. Robert Kahn, Special Projects
Atari Inc., Sunnyvale CA

Dear Bob:

I am enclosing a printout of the TUNER half of our RUMDRUMS program, as revised since sending you both halves over the datalink. I hope it finds you uneaten by alligators or scorpions, unravaged by strange tropical maladies, and otherwise recovered from the junket into the wilds of Hispaniola.

It should take you less than a half-hour to compare these listings with a procedure-by-procedure listing of the file you now have, and edit that file to conform with the new printout. From here on, the game in its present form will at least work without any unintentional bugs, and with a reasonable degree of explicitness to guide the user through it. As the bugs have disappeared, the running of the program becomes more reliable. (More than 6 cycles should be OK.)

The only bug I'm aware of now is when you load in (or read from disk) a file that has been made with the KEEP procedure. Even though tunes are now stored in segments, rather than a single long list, the version of Logo I have still refuses to read or load a procedure line of more than 3 physical lines properly, and loses the surplus. I have written directly to LCSI about this, and am hoping that the later version you have won't cause this problem. (If the problem has been fixed, I would beseech you to try persuading Bonnie Umphreys to send me a more recent cartridge in exchange for the one I have, which is Version 11.)

My latest invoice was slightly amended, mainly to prevent any hangups in processing the item for incidental expenses. It now reflects a small fraction of the additional debugging time put in since the previous invoice, but is otherwise almost the same. I'm hoping you can get it put through the payment machinery before midsummer, as I'll be traveling in July.

I feel good about putting RUMDRUMS into the hands of your camp kids in its present state. Hope there is some way I can be kept apprised of any interesting improvements they may make in it -- such as a better drum sound, for starters. Please let me know if you come East before I go North: this is a great place to hide out and catch one's breath, and there's lots of room.

Bob

enclosure

Beckwith Lesson Plan

Show what we have already

Show RUM DRUMS

1. Input Methods Composed for Different Programs

MM Box – Joystick + Step Graph

AMus Sys – Alpha / Num equiv. for notes
Music Comp

Rumdrums – Letter Code for Rhythm

Player Piano – Typewriter Keyboard simulating Music Keyboard

Music Composer – INST. for Each Voice (Arranger / Orchestrator)

Music Lessons

Statements in BASIC
- Sound demo –
- PokeSound – Poke Statement
- Song Write – Data Statement

Rum Drum – Toot Statement, Set Env.

2. Composing by Default or at Random

How creative can a program be ?

Playing with already written computer program

3. Playing with and without Displays

Piano Keyboard – Player Piano

Adv. Music System – Playback Control

4. Drumming – Different Kinds of Drums

NEW

```
TO HELLO
CT .DEPOSIT 710 57
PR1 2 [Atari / Club Med invites you to enter] SETCURSOR [8 6]
PR [THE RHYTHMIC WORLD OF]
PR [] PR [] PR [* * * * *  R U M D R U M S  * * * * *]
PR [] PR [] PR [Program Copyright @ 1983 R.S.Beckwith]
PR [] PR [] PR [* * * * * All Rights Reserved * * * *] PR [] WAIT 350
.DEPOSIT 710 133 MAKE "CAT [R@] MAKE "BEAT 28
CT PR [] PR [] PR SE [First, let's MAKE "BEAT] :BEAT
PR [] PR [( a higher number = slower beat )]
WAIT 100 PR [] PR ( SE [A beat of] :BEAT [sounds like this:] )
MAKE "R@ [IIIIIIIII] MAKE "COD :R@
DRUMIT WAIT 240 HELLO1
PR [] PR [] PR [] PR [To start, just type: TRY] WAIT 500
PR [] PR [] PR [] PR [.....Go ahead!...TRY !!] ER [HELLO1 HELLO]
END

TO HELLO1
PR [] PR [] PR []
PR [In RUMDRUMS code,] PR []
PR SE [that rhythm was:] :COD
PR [] PR [( 8 code letters = 8 beats )] PR []
PR [] PR [] WAIT 400 PR [Can't YOU write some better rhythms?]
WAIT 500 CT
PR [] PR [1) Use the code to create new rhythms]
PR [( Try making words of equal length. )] WAIT 200
PR [] PR [] PR [2) DRUM your rhythms, in any order,]
PR [to build longer drumsongs.]
WAIT 200 PR [] PR [] PR [3) When you have a good long sequence]
PR [you can add a TUNE to your drums!] WAIT 400
END

TO SEE1 :PL :N
IF [] = :PL [STOP]
SETCURSOR SE 2 :N
TYPE SE WORD FIRST :PL ": THING FIRST :PL
SEE1 BF :PL :N + 1
END

TO DRUM
PR SE [Choose from:] :CAT PR []
PR [Type pattern names in any order:] PR [] MAKE "IN RL
IF [] = :IN [STOP] [MAKE "COD :IN]
CT SEE1 :COD 3 PR [] PR [] DRUMIT
END

TO SONG2 :PD
IF [] = :PD [.DEPOSIT 710 133 STOP]
TOOT 1 50 15 * FIRST :PD 5
TOOT 1 50 0 ( FIRST BF :PD ) - 5
SONG2 BF BF :PD
END

TO DRUM3 :PQ :HD
IF :PQ = [] [OP []]
OP SE DRUM2 FIRST THING FIRST :PQ :HD DRUM3 BF :PQ :HD
END

TO DRUM2 :DD :HD
IF " = :DD [OP []]
OP SE DRUM1 FIRST :DD :HD DRUM2 BF :DD :HD
END
```

```
IF OR "I = :D 1 = :D [OP SE 1 :BEAT]
IF OR "O = :D O = :D [OP SE O :BEAT]
IF "W = :D [OP ( SE 1 :HD 1 :HD )]
IF ". = :D [OP ( SE O :HD 1 :HD )]
PR [Use only the 4 code symbols!]
END

TO PREDRUM
.DEPOSIT 53765 O
SETENV 1 1 .DEPOSIT 710 26
MAKE "TUNED "FALSE RECYCLE
END

TO KL
.DEPOSIT 710 86
.DEPOSIT 710 86
.DEPOSIT 710 26
END

TO B&
REPEAT 5 [TOOT 1 50 O :BEAT KL]
END

TO TUNE
CT PR1 9 [First, do ERPS and LOAD "D:TUNER] PR [] PR []
PR [then type  TUNE  again, and listen !!] PR []
END

TO HELP
CT PR [] PR [ SEE  to see list of patterns made]
PR [] PR [ DRUM  to hear patterns in any order]
PR [] PR [ A  to hear same thing AGAIN]
PR [] PR [ TUNE  to add a TUNE to your sequence]
PR [] PR [ TRY  to make more drum patterns] PR []
END

TO CAT :IN :ON
MAKE "ON WORD "R CHAR ( 1 + ASCII LAST LAST :CAT )
MAKE :ON :IN MAKE "CAT SE :CAT :ON
PR1 O SE [ok, your rhythm saved as:] :ON
SEE2
END

TO A
RECYCLE
IF :TUNED [DSONG :PQ] [B& SONG2 :PDQ]
TYPE [A again?]
IF 65 = ASCII RC [A] [PR []]
END

TO DRUMIT
IF NAMEP FIRST :COD [MAKE "PDQ DRUM3 :COD ROUND :BEAT / 2] [MAKE "PDQ DRUM2 FIR
T :COD ROUND :BEAT / 2]
PREDRUM B& SONG2 :PDQ
END

TO PR1 :R :L
SETCURSOR SE O :R
PR [] SETCURSOR SE O :R
TYPE :L
END

TO TRY
CT
PR1 2 [Code letters for rhythm are:]
```

```
PR1 6 [Type your rhythm as a code word:] PR [] PR [] MAKE "COD RL
IF [] = :COD [STOP] [DRUMIT]
PR1 2 [Press  A  to hear again - or RETURN]
PR1 4 [] PR1 6 []
IF 65 = ASCII RC [A]
CT PR1 2 [SPACE to save that rhythm, or RETURN]
IF 32 = ASCII RC [CAT :COD "] [SETCURSOR [0 2]]
PR [RETURN to make more drum patterns,]
PR [or SPACE to work with those you have]
IF 32 = ASCII RC [HELP] [TRY]
END

TO SEE2
PR1 2 SE [Now in catalog:] :CAT
SEE1 :CAT 5 PR [] PR []
END

TO SEE
CT SEE2
END


MAKE "RC [OIOW.IIO]
MAKE "RD [WW.W.WIO]
MAKE "RB [I.IW.IWW]
MAKE "RA [IW.IWW.I]
MAKE "D [1 24 1 12 1 12 0 12 1 12 1 24]
MAKE "TUNED "FALSE
```

Proc / Variable	Calls
TUNE	TUNE 1
TUNE 1 N = Range of Randomness MN = Length of Subphrase PRAN = List of Notes in Random Tune	PRAN
PRAN PTAB – List of lists of notes	PRAN 1

RA WWOWWOWO
RB I.W.I.WO
RC WWIOWWIO
RD
PDQ
TUNED False
D
IN RC RB RC RA
COD RC RB RC RA
BEAT 28
CAT P@ RA RB RC

R@ IIIIIIII
RA IW.IWW.I
RB I.IW.IWW
RC OIOW.IIO
RD WW.W.WIO
RE WI WI WI WI
RF W.W.W.W.

PDQ Σ 1 14 1 14 RE
0 14 1 14 RF
1 14 1 14 RE
0 14 1 14 RF
1 14 1 14
0 14 1 14
1 14 1 14
0 14 1 14]

IN RF

TUNED False
Beat 28
COD RF
CAT R@ RA ... RJ

TUNE

4, 4

194 131 131 96 110 173 220

173 146 194 173 129 131 131 332 165

PQ4 0 14 131 14 131 14

332 14 0 14 165 14

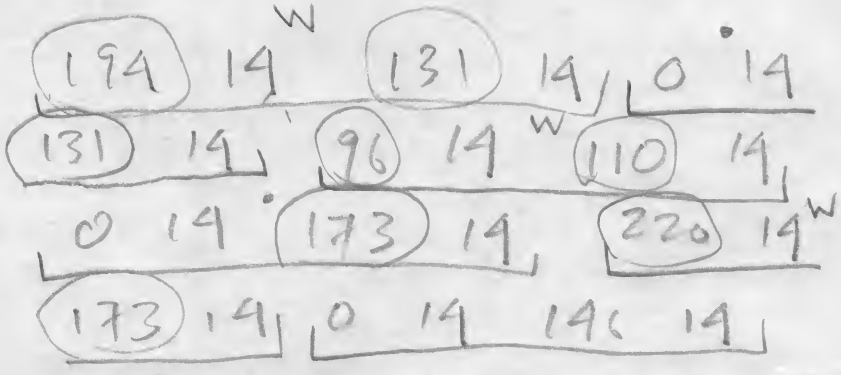
PQ3 131 14 0 14 131 14

332 14 165 14

PQ2 131 14 131 14 0 14

332 14 165 14

PQ1



PRAN 194 131 131 96 110 173

220 173 146 194 173 129

131 131 332 165

RE W I W I W I W I

1 14 1 14 1 28 1 14

1 14 1 28 1 14 1 14

1 28 1 14 1 14 1 28

I = [1 28]

O = [0 28]

W = [1 14 1 14]

o = [0 14 1 14]

PQ [PQ1 PQ2 PQ3 PQ4]

Tuned Thru

COD [RF]

CAT

PQ1	194	14	131	14	W
	0	14	131	14	.
	96	14	110	14	W
	0	14	173	14	.
	220	14	173	14	W
	0	14	196	14	.
	194	14	173	14	W
	0	14	129	14	.
PQ2	131	14	131	14	W
	0	14	332	14	.
	165	14			W
PQ3			131	14	
	0	14	131	14	.
	332	14	165	14	W
PQ4	0	14	131	14	.
	131	14	332	14	W

RUMDRUMS 1.4 June 83 @R.S. Beckwith

TUNER

```
TO READ1
MAKE "NAME RL
IF [END] = :NAME [STOP]
RUN :NAME
READ1
END

TO READ :NAME
IF LISTP :NAME [MAKE "NAMES BF :NAME MAK
E "NAME FIRST :NAME] [MAKE "NAMES []]
SETREAD WORD "D: :NAME
MAKE "NAME RL
READ1
IF EMPTYP :NAMES [SETREAD []] [READ :NAM
ES]
END

TO ALLP :N :NN
IF :NN = :N [OP []]
OP SE WORD "P@ :NN ALLP :N :NN + 1
END

TO NEWP2 :PL :DL :NP
IF [] = :PL [MAKE "LD :DL OP []]
IF [] = :DL [MAKE "DL :P@@]
IF 0 = FIRST :DL [MAKE "NP 0] [MAKE "NP
FIRST :PL MAKE "PL BF :PL]
OP ( SE :NP FIRST BF :DL NEWP2 :PL BF BF
 :DL [] )
END

TO TUNE
DT
TUNE1 [] []
PR [] PR [] PR [SPACE to try another tun
e, or RETURN] PR []
IF 32 = ASCII RC [TUNE] [PR [Type KEEP t
o save that tune]]
END

TO NEWP :LP :LD :C :N
IF [] = :C [TYPE "PP SETP 1/[ 1 2 3 4 5 6]
SETP WORD "P@ :N NEWP2 :LP :LD []
IF :C = 6 [LD :C :N + 1
```

```
[illegible]
[illegible] SPECIFY a number? ) 3 + 5 )
[illegible] RL IF [] = :N [MAKE "N 33 [MAKE
FIRST :N]]
PR [] PR [Length of each subphrase? ( 2
- 2 )]
MAKE "MN RL IF [] = :MN [MAKE "MN 33 [MA
KE "MN FIRST :MN]]
PR [] PR [...how about this for a tune?.
..]
MAKE "PRAN PRAN PTAB
PR [] TUNEUP :PRAN
IF 32 = ASCII RC [CT STOP] [RECYCLE CT C
YCLER]
PR [..ok, here it comes with your rhythm
:]
NEWP :MN :PDO :N 1
PRETUNE PLAY :PQ
PR [] PR [Press  A  to hear Again - or R
ETURN] IF "A = RC [A]
CT
END

TO A
IF :TUNED [PLAY :PQ] [B% SONG2 :PDO]
TYPE [A again?]
IF 65 = ASCII RC [A]
END

TO PTAB
OP [[96 131 165 194 262 332] [110 147 17
3 220 262 86] [248 194 147 173 98 124] [
262 165 131 332 96 194]]
END

TO TUNEUP :PL
MAKE "MN LPR :PL
MAKE "PL NEWD :MN
PRETUNE DSONG :PL
PR [] PR [Dig it? If SO, hit any key but
 SPACE]
END

TO PRAN :PLL
IF [] = :PLL [OP []]
OP FPUT PRAN1 RAN :MN :N FIRST :PLL PRAN
 BF :PLL
END

TO CYCLER
MAKE "N COUNT1 1 0 :PDO
[illegible]
```

```
PR :PRAN PR [] PR ( SE [Tune has] COUNT
:MN [notes] )
SEE1 :COD 6
PR [] PR [] PR ( SE [Rhythm has] :N [att
acks] )
PR [] PR [How many cycles of tune? ( 1 -
 6 )]
MAKE "N RL IF [] = :N [MAKE "N 3] [MAKE
"N FIRST :N]
END

TO PRETUNE
SETENV 0 1 .DEPOSIT 710 86
MAKE "TUNED "TRUE RECYCLE
END

TO LPR :IL
IF [] = :IL [OP []]
PR FIRST :IL
OP SE FIRST :IL LPR BF :IL
END

TO NEWD :PL
IF [] = :PL [OP []]
OP ( SE FIRST :PL :BEAT NEWD BF :PL )
END

TO DSONG :PL
IF [] = :PL [.DEPOSIT 53760 0 .DEPOSIT 5
3762 0 .DEPOSIT 710 133 STOP]
IF 0 = FIRST :PL [TOOT 0 20 0 FIRST BF :
PL] [TOOT 0 FIRST :PL 14 ( FIRST BF :PL
) - 3 TOOT 0 20 0 3]
DSONG BF BF :PL
END

TO SEE1 :PL :N
IF [] = :PL [STOP]
SETCURSOR SE 2 :N
TYPE SE WORD FIRST :PL ": THING FIRST :P
L
SEE1 BF :PL :N + 1
END

TO PRAN1 :RAN :PL
IF :RAN = [] [OP []]
OP SE PICK FIRST :RAN :PL PRAN1 BF :RAN
```

```
TO COUNT1 :I :S :L
IF [] = :L [OP :S]
IF :I = FIRST :L [MAKE "S :S + 1]
OP COUNT1 :I :S BF BF :L
END

TO PICK :N :L
IF :L = [] [OP []]
IF :N = 1 [IF WORDP :L [OP :L] [OP FIRST
 :L]]
OP PICK :N - 1 BF :L
END

TO PLAY :L
IF [] = :L [STOP]
.DEPOSIT 710 86 RECYCLE
IF NAMEP FIRST :L [EDSONG THING FIRST :L]
 [EDSONG FIRST :L]
PLAY BF :L
END

TO KEEP1 :PQ
IF [] = :PQ [STOP]
TYPE SE [MAKE] WORD "" FIRST :PQ
SHOW THING FIRST :PQ
KEEP1 BF :PQ
END

TO KEEP
PR [Keep under which filename?]
PR [( 1 word, 8 letters or less )]
MAKE "NAME FIRST RL
SETWRITE WORD "D: :NAME
PR SE [TO] :NAME
KEEP1 :PQ
TYPE [PLAY] SHOW :PQ
PR [END]
SETWRITE []
PR [To get that tune back, type:]
PR SE [READ] WORD "" :NAME
END
```

✓ = new or revised in this version

```
TO PRAN1 :RAN :PL
IF :RAN = [] [OP []]
OP SE PICK FIRST :RAN :PL PRAN1 BF :RAN :PL
END

TO RAN :N :MN
IF :N = 0 [OP []]
OP SE (1 + RANDOM :MN) RAN :N - 1 :MN
END

TO NEWD :PL
IF [] = :PL [OP []]
OP ( SE FIRST :PL :BEAT NEWD BF :PL )
END

TO ALLP :N :NN
IF :NN = :N [OP []]
OP SE WORD "PQ :NN ALLP :N :NN + 1
END

TO NEWP2 :PL :DL :NP
IF [] = :PL [MAKE "LD :DL OP []]
IF [] = :DL [MAKE "LP :PL OP []]
IF 0 = FIRST :DL [MAKE "NP 0] [MAKE "NP FIRST :PL MAKE "PL BF :PL]
MAKE "NP SE :NP FIRST BF :DL
OP SE :NP NEWP2 :PL BF BF :DL []
END

TO PICK :N :L
IF :L = [] [OP []]
IF :N = 1 [IF WORDP :L [OP :L] [OP FIRST :L]]
OP PICK ( :N - 1 ) BF :L
END

TO KEEP
PR [Keep under which filename?]
PR [( 1 word, 8 letters or less )]
MAKE "NAME FIRST RL
PR [] PR [Special name for that tune?]
MAKE "TNAME FIRST RL
SETWRITE WORD "D: :NAME
PR SE [TO] :TNAME
TYPE [PRETUNE PLAY]
SHOW KEEP1 :PQ
PR [END]
SETWRITE []
PR SE [ok, your tune saved in file:] :NAME
END

TO PLAY :L
IF [] = :L [STOP]
IF NAMEP FIRST :L [DSONG THING FIRST :L]
PLAY BF :L
END

TO PRETUNE
.DEPOSIT 53761 0 .DEPOSIT 53763 0
SETENV 0 1 .DEPOSIT 710 86
MAKE "TUNED "TRUE RECYCLE
END

TO NEWP :LP :LD :N
IF [] = :LD [MAKE "PQ ALLP :N 1 STOP]
MAKE WORD "PQ :N NEWP2 :LP :LD []
```

```
NEWP :LP :LD :N + 1
END

TO TUNEUP :PL
MAKE "PL NEWD :PL
PRETUNE DSONG :PL
PR [] PR [Dig it? If SO, hit any key but SPACE]
END

TO PTAB
OP [[96 131 165 194 262 332] [110 147 173 220 262 86] [124 194 146 173 96 348] [
262 165 131 332 96 392]]
END

TO PRAN :PLL
IF [] = :PLL [OP []]
OP SE PRAN1 RAN :MN :N FIRST :PLL PRAN BF :PLL
END

TO TUNE1 :N :MN
PR [Want to specify a range? ( 3 - 6 )]
MAKE "N RL IF [] = :N [MAKE "N 3] [MAKE "N FIRST :N]
PR [] PR [Length of each subphrase? ( 2 - 8 )]
MAKE "MN RL IF [] = :MN [MAKE "MN 3] [MAKE "MN FIRST :MN]
PR [] PR [...how about this for a tune?...]
MAKE "PRAN PRAN PTAB
CT PR :PRAN TUNEUP :PRAN
IF 32 = ASCII RC [STOP]
PR [] PR [..and here it comes with your rhythm:]
NEWP :PRAN :PDQ 1
SEE1 :COD 9 PRETUNE PLAY :PQ
PR [] PR [] PR [] PR [Press  A  to hear Again - or RETURN] IF "A = RC [A]
CT
END

TO KEEP1 :PQ
IF [] = :PQ [OP []]
OP SE THING FIRST :PQ KEEP1 BF :PQ
END

TO DSONG :PL
IF [] = :PL [.DEPOSIT 53760 0 .DEPOSIT 53762 0 .DEPOSIT 710 133 STOP]
IF 0 = FIRST :PL [TOOT 0 20 0 FIRST BF :PL] [TOOT 0 FIRST :PL 14 ( FIRST BF :PL
) - 3 TOOT 0 20 0 3]
DSONG BF BF :PL
END

TO SEE1 :PL :N
IF [] = :PL [STOP]
SETCURSOR SE 2 :N
TYPE SE WORD FIRST :PL ": THING FIRST :PL
SEE1 BF :PL :N + 1
END

TO TUNE
CT
TUNE1 [] []
PR [] PR [] PR [SPACE to try another tune, or RETURN] PR []
IF 32 = ASCII RC [TUNE] [PR [Type KEEP to save that tune]]
END

TO A
RECYCLE
IF :TUNED [PRETUNE PLAY :PQ] [B& SONG2 :PDQ]
TYPE [A again?]
IF 65 = ASCII RC [A]
```

```
END

MAKE "RC [OIOW.IIO]
MAKE "RD [WW.W.WIO]
MAKE "RB [I.IW.IWW]
MAKE "RA [IW.IWW.I]
MAKE "D [1 24 1 12 1 12 0 12 1 12 1 24]
MAKE "TUNED "FALSE
```

```
TO HELLO
CT .DEPOSIT 710 57
PR1 2 [Atari / Club Med invites you to enter] SETCURSOR [8 6]
PR [THE RHYTHMIC WORLD OF]
PR [] PR [] PR [* * * * *  R U M D R U M S  * * * * *]
PR [] PR [] PR [Program Copyright @ 1983 R.S.Beckwith]
PR [] PR [] PR [* * * * * All Rights Reserved * * * *] PR [] WAIT 350
.DEPOSIT 710 133 MAKE "CAT [R@ RA RB RC RD] MAKE "BEAT 28
CT PR [] PR [] PR SE [First, let's MAKE "BEAT] :BEAT
PR [] PR [( a higher number = slower beat )]
WAIT 100 PR [] PR ( SE [A beat of] :BEAT [sounds like this:] )
MAKE "R@ [IIIIIIII] MAKE "COD :R@
DRUMIT WAIT 240 HELLO1
PR [] PR [] PR [] PR [To start, just type: TRY] WAIT 500
PR [] PR [] PR [] PR [.....Go ahead!...TRY !!]
END

TO HELLO1
PR [] PR [] PR []
PR [In RUMDRUMS code,] PR []
PR SE [that rhythm was:] :COD
PR [] PR [( 8 code letters = 8 beats )] PR []
PR [] PR [] WAIT 400 PR [Can't YOU write some better rhythms?]
WAIT 500 CT
PR [] PR [1) Use the code to create new rhythms]
PR [( Try making words of equal length. )] WAIT 200
PR [] PR [] PR [2) DRUM your rhythms, in any order,]
PR [to build longer drumsongs.]
WAIT 200 PR [] PR [] PR [3) When you have a good long sequence]
PR [you can add a TUNE to your drums!] WAIT 400
END

TO DRUM
PR SE [Choose from:] :CAT PR []
PR [Type pattern names in any order:] PR [] MAKE "IN RL
IF [] = :IN [STOP] [MAKE "COD :IN]
CT SEE1 :COD 3 PR [] PR [] DRUMIT
END

TO SONG2 :PD
IF [] = :PD [.DEPOSIT 710 133 STOP]
IF 0 = FIRST :PD [TOOT 1 50 0 5] [TOOT 1 45 15 5]
.DEPOSIT 53761 0 TOOT 1 50 0 ( FIRST BF :PD ) - 5 .DEPOSIT 53761 0
SONG2 BF BF :PD
END

TO DRUM3 :PQ :HD
IF :PQ = [] [OP []]
OP SE DRUM2 FIRST THING FIRST :PQ :HD DRUM3 BF :PQ :HD
END

TO DRUM2 :DD :HD
IF " = :DD [OP []]
OP SE DRUM1 FIRST :DD :HD DRUM2 BF :DD :HD
END

TO DRUM1 :D :HD
IF OR "I = :D 1 = :D [OP SE 1 :BEAT]
IF OR "O = :D 0 = :D [OP SE 0 :BEAT]
IF "W = :D [OP ( SE 1 :HD 1 :HD )]
IF ". = :D [OP ( SE 0 :HD 1 :HD )]
PR [Use only the 4 code symbols!]
END

TO PREDRUM
```

```
.DEPOSIT 53761 0
.DEPOSIT 53763 47
SETENV 1 1 .DEPOSIT 710 26
MAKE "TUNED "FALSE RECYCLE
END

TO KL
.DEPOSIT 710 86
.DEPOSIT 710 86
.DEPOSIT 710 26
END

TO B&
REPEAT 5 [TOOT 1 50 0 :BEAT KL]
END

TO HELP
PR [] PR [ SEE  to see list of patterns made]
PR [] PR [ DRUM  to hear patterns in any order]
PR [] PR [ A  to hear same thing AGAIN]
PR [] PR [ TUNE  to add a TUNE to your sequence]
PR [] PR [ TRY  to make more drum patterns]
PR [] PR []
END

TO A
RECYCLE
IF :TUNED [DSONG :PQ] [B& SONG2 :PDQ]
TYPE [A again?]
IF 65 = ASCII RC [A] [PR []]
END

TO DRUMIT
IF NAMEP FIRST :COD [MAKE "PDQ DRUM3 :COD ROUND :BEAT / 2] [MAKE "PDQ DRUM2 FIRS
T :COD ROUND :BEAT / 2]
PREDRUM B& SONG2 :PDQ
END

TO TRY
CT
PR1 2 [Code letters for rhythm are:]
PR1 4 [ I "one"  O "oh"  W "double"  . "dot"]
PR1 6 [Type your rhythm as a code word:] PR [] PR [] MAKE "COD RL
IF [] = :COD [STOP] [DRUMIT]
PR1 2 [Press  A  to hear again - or RETURN]
PR1 4 [] PR1 6 []
IF 65 = ASCII RC [A]
CT PR1 2 [To save that rhythm,]
PR1 6 [press SPACE - or RETURN for a new try]
IF 32 = ASCII RC [CAT :COD "]
RECYCLE IF 32 = ASCII RC [SEE] [TRY]
PR [RETURN to make more drum patterns,]
PR [or SPACE to work with those you have]
IF 32 = ASCII RC [HELP] [TRY]
END

TO SEE1 :PL :N
IF [] = :PL [STOP]
SETCURSOR SE 2 :N
TYPE SE WORD FIRST :PL ": THING FIRST :PL
SEE1 BF :PL :N + 1
END

TO CAT :IN :ON
MAKE "ON WORD "R CHAR ( 1 + ASCII LAST LAST :CAT )
MAKE :ON :IN MAKE "CAT SE :CAT :ON
```

```
PR1 2 SE [ok, your rhythm saved as:] :ON
PR1 4 [......Want to see more? just]
END

TO PR1 :R :L
SETCURSOR SE 0 :R
PR [] SETCURSOR SE 0 :R
TYPE :L
END

TO SEE
CT PR1 0 SE [Now in catalog:] :CAT
SEE1 :CAT 3 PR [] PR []
END


MAKE "RC [OIOW.IIO]
MAKE "RD [WW.W.WIO]
MAKE "RB [I.IW.IWW]
MAKE "RA [IW.IWW.I]
```

```
TO PRAN :PLL
IF [] = :PLL [OP []]
OP SE PRAN1 RAN :MN :N FIRST :PLL PRAN BF :PLL
END

TO PTAB
OP [[96 131 165 194 262 332] [110 147 173 220 262 86] [124 194 146 173 96 348] [
262 165 131 332 96 392]]
END

TO TUNEUP :PL
MAKE "PL NEWD :PL
PRETUNE DSONG :PL
PR [] PR [Dig it? If SO, hit any key but SPACE]
END

TO NEWP :LP :LD :N
IF [] = :LD [MAKE "PQ ALLP :N 1 STOP]
MAKE WORD "PQ :N NEWP2 :LP :LD []
NEWP :LP :LD :N + 1
END

TO PRAN1 :RAN :PL
IF :RAN = [] [OP []]
OP SE PICK FIRST :RAN :PL PRAN1 BF :RAN :PL
END

TO RAN :N :MN
IF :N = 0 [OP []]
OP SE 1 + RANDOM :MN RAN :N - 1 :MN
END

TO NEWD :PL
IF [] = :PL [OP []]
OP ( SE FIRST :PL :BEAT NEWD BF :PL )
END

TO ALLP :N :NN
IF :NN = :N [OP []]
OP SE WORD "PQ :NN ALLP :N :NN + 1
END

TO NEWP2 :PL :DL :NP
IF [] = :PL [MAKE "LD :DL OP []]
IF [] = :DL [MAKE "LP :PL OP []]
IF 0 = FIRST :DL [MAKE "NP 0] [MAKE "NP FIRST :PL MAKE "PL BF :PL]
MAKE "NP SE :NP FIRST BF :DL
OP SE :NP NEWP2 :PL BF BF :DL []
END

TO PICK :N :L
IF :L = [] [OP []]
IF :N = 1 [IF WORDP :L [OP :L] [OP FIRST :L]]
OP PICK ( :N - 1 ) BF :L
END

TO PRETUNE
.DEPOSIT 53761 0 .DEPOSIT 53763 0
SETENV 0 1 .DEPOSIT 710 86
MAKE "TUNED "TRUE RECYCLE
END

TO KEEP
PR [Keep under which filename?]
PR [( 1 word, 8 letters or less )]
```

```
MAKE "NAME FIRST RL
PR [] PR [Special name for that tune?]
MAKE "TNAME FIRST RL
SETWRITE WORD "D: :NAME
PR SE [TO] :TNAME
TYPE [PRETUNE DSONG]
SHOW :PQ
PR [END]
SETWRITE []
PR SE [ok, your tune saved in file:] :NAME
END

TO TUNE1 :N :MN
PR [Want to specify a range? ( 3 - 6 )]
MAKE "N RL IF [] = :N [MAKE "N 3] [MAKE "N FIRST :N]
PR [] PR [Length of each subphrase? ( 2 - 8 )]
MAKE "MN RL IF [] = :MN [MAKE "MN 3] [MAKE "MN FIRST :MN]
PR [] PR [...how about this for a tune?...]
MAKE "PRAN PRAN PTAB
CT PR :PRAN TUNEUP :PRAN
IF 32 = ASCII RC [STOP]
PR [] PR [..and here it comes with your rhythm:]
NEWP :PRAN :PDQ 1
SEE1 :COD 9 PRETUNE PLAY :PQ
PR [] PR [] PR [] PR [Press  A  to hear Again - or RETURN] IF "A = RC [A]
CT
END

TO PLAY :L
IF [] = :L [STOP]
IF NAMEP FIRST :L [DSONG THING FIRST :L]
PLAY BF :L
END

TO DSONG :PL
IF [] = :PL [.DEPOSIT 53760 0 .DEPOSIT 53762 0 .DEPOSIT 710 133 STOP]
IF 0 = FIRST :PL [TOOT 0 20 0 FIRST BF :PL] [TOOT 0 FIRST :PL 14 ( FIRST BF :PL
) - 3 TOOT 0 20 0 3]
DSONG BF BF :PL
END

TO TUNE
CT
TUNE1 [] []
PR [] PR [] PR [SPACE to try another tune, or RETURN] PR []
IF 32 = ASCII RC [TUNE] [PR [Type KEEP to save that tune]]
END

TO A
RECYCLE
IF :TUNED [PRETUNE PLAY :PQ] [B& SONG2 :PDQ]
TYPE [A again?]
IF 65 = ASCII RC [A]
END

TO SEE1 :PL :N
IF [] = :PL [STOP]
SETCURSOR SE 2 :N
TYPE SE WORD FIRST :PL ": THING FIRST :PL
SEE1 BF :PL :N + 1
END


MAKE "RC [OIOW.IIO]
MAKE "RD [WW.W.WIO]
MAKE "RB [I.IW.IWW]
MAKE "RA [IW.IWW.I]
```

Demonstrating the ATARI Music Composer

The full options and commands of Atari's Music Composer are too complicated to master in a short time. Rather than let students explore the full capabilities of the program on their own, you should demonstrate the program's ability to retrieve and play already-written tunes, stored in a disk file, and then introduce simple music composition by writing a simple tune in one or two voices for them.

To begin using the program, do the following:

1. Turn OFF the ATARI 800.
2. Open the top, insert the Music Composer Cartridge in the left slot, and then close the top.
3. Turn ON the empty disk drive and wait for it to ready itself.
4. Put the disk containing the music selections for this course in the drive and close the door.
5. Turn ON the ATARI 800 (the ATARI will bootstrap its Disk Operating System (DOS) from the disk, and when ready, show the words "ATARI MUSIC" followed by a menu, ending with the word, "WHICH?"

PLAYING ALREADY WRITTEN AND STORED TUNES

1. After the word "WHICH?" following the menu, type R (RETURN) to Retrieve music from the disk. This will bring the "RETRIEVE MUSIC" menu onto the screen, followed by "FN?". This indicates that the program is waiting for a File Name.
2. Type "D:JOPLIN (RETURN)". The computer will respond, "WHICH?".
3. Type "E (RETURN)" indicating Everything.
4. The program will load the music file from the disk, and when finished, the computer will display "FN?" again.
5. Type "S (RETURN) to Stop retrieving. The computer will return to the main menu.
6. Type "L (RETURN)" for Listen, to have the program play Scott Joplin's "Easy Rag." Be sure you have turned up the volume on the TV enough to hear the music.
7. Repeat all the above steps, this time using the file name "BACH," to have the machine play J.S. Bach's "Bouree."

COMPOSING YOUR OWN MUSIC

1. Turn the ATARI 800 OFF and then ON again to clear out all previous music.
2. Type "E (RETURN)" to Edit music.
3. A new menu called "EDIT MUSIC" will appear.
4. Type "P (RETURN)" for Phrase. Then type "1" for the number of the phrase you are presently going to enter.
5. Type "Y" after the word "ERASE?" to Erase any previous version of this phrase.
6. The screen will now show a colored musical staff without notes, and with a vertical black bar marking your current position.
7. The following abbreviations will allow you to write musical notes and other marks:
   a. The letters A-G stand for those notes, respectively.
   b. Q = quarter note
      H = half note
      W = whole note
      E = eighth note
      S = sixteenth note
      R = rest
   c. The numbers 3,4,5 and 6 stand for octaves; 3 is the lowest.
8. A note is specified by the letter of its name, an optional octave number (used if you change the octave), and a letter indicating duration. For example, C4Q is a quarter note, middle C.
9. The beginning time signature is always 4/4. After each 4 counts, you must type "M" for a new measure.
10. The following eight measures will produce the tune, "Yankee Doodle":

```
C4Q   CQ   DQ   EQ   M
CQ    EQ   DQ   RQ   M
CQ    CQ   DQ   EQ   M
CQ    RQ   G3Q  RQ   M
C4Q   CQ   DQ   EQ   M
FQ    EQ   DQ   CQ   M
B3Q   GQ   AQ   BQ   M
C4Q   RQ   CH        M
```

11. To listen to this entire tune, first type "S" to return to the EDIT MUSIC menu.

12. Now type "S" again to return to the main menu, and then type "L", as before, to Listen to your composition.

13. To check your composition, follow the steps for retrieval of a tune from the disk, entering "DOODL1" after the program asks for "FN?" (file name). This will retrieve and play a pre-recorded version of Yankee Doodle.

14. The file name "DOODL2" contains the same tune with an added voice in the bass clef for harmony.

Refer to the Music Composer Manual provided with the cartridge for further information on using the program.

Alouette

Time Signature 9/4

One Sharp

VOICE 1 (Melody)

Song Phrase 1

G4Q. AE BQ BQ M

AE. GS. AE. BS GQ DG M

GQ. AE BQ BQ M

AE. GS AE. BS GH M

Refrain Phrase 2

~~G~~4E. GS GE. FSS GE. BS D5Q M

DE. ES DE. CS B4E. AS GQ M

D5E. DS DQ [illegible] D3E. DS DQ M

D5E. DS DQ [illegible] D3E. DS DQ M

D5W M

Song Phrase 1

G4Q. AE BQ BQ M

AE. GS AE. BS GQ DQ M

G4Q. AE BQ BQ M

AE. GS AE. BS GH M

Phrase 3

RW M

[illegible]

Phrase 4

B3Q C4Q DH m

CQ DQ B3H m

BQ C4Q DH m

CQ DQ B3H m

Phrase 5

D4H m

DH DH m

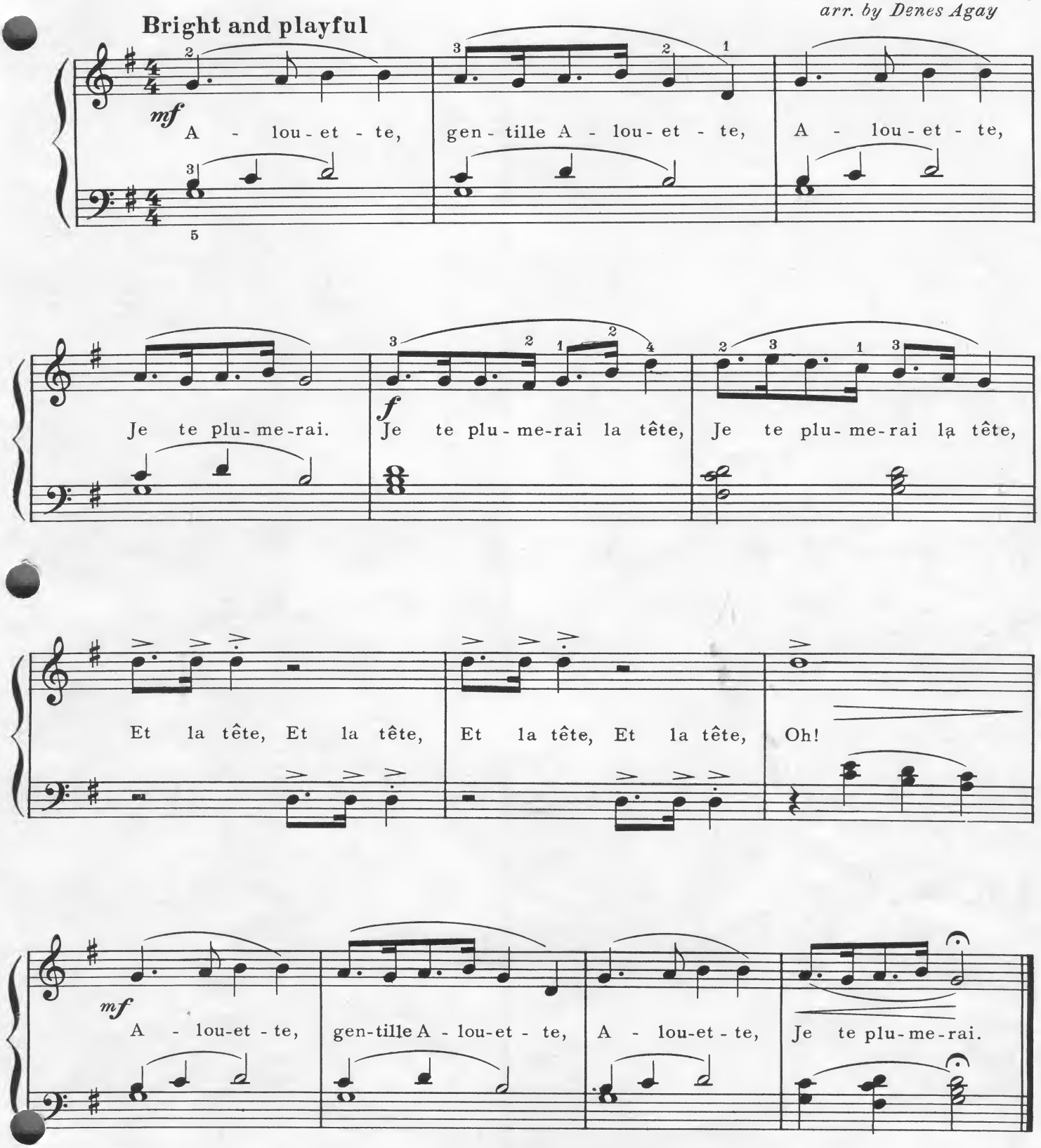
RH D3E. D5 DQ m

RH D3E. D5 DQ m

RQ E4Q DQ CQ m

Alouette

French Canadian Folk Song
arr. by Denes Agay



LISTEN

MUSIC COMPOSER COLUMN

MIKE DES CHENES

As long as readers show an interest in this column, it will be a regular feature and will contain listings (notes) for various scores and arrangements of popular music. However; this being the first issue; I felt that it would be wise to use the following pages to explain some of the basics of reading music. Personally, I didn't know a thing about musical composition until ATARI released the Music Composer cartridge.

Since owning an ATARI, my wife noticed that our expenses were slightly higher than normal. Not because of my obsession for software or my excessive use of electricity, but because of the increased number of long distance phone calls. Our phone bill began to resemble a 48K program listing. I became one of the many ATARI owners who found themselves getting a little impatient for new software. Don't get me wrong! I was completely satisfied with spending many late nights battling Zylons. It was just that everyone I knew had seen Star Raiders and I wanted something new to show off. So I started a phone directory that listed every ATARI dealer within a 75 mile radius, and would call at least one dealer every day. One afternoon, without warning, a voice on the other end said "We just received a shipment of Music Composer cartridges." I had to have it that day even if it meant driving 50 miles and charging it to Master Charge. I didn't even care what Music Composer did. I had to have it!!!

I finally made it home alive (I found it very difficult driving and reading the manual at the same time.) I plugged it in and flipped the power switch...WOW! Edit, Arrange, Save, Retrieve, DOS, Listen, what's this?...Copyright 1979? What took so long? After an hour of going through the sub menus, I decided that if I expected to hear some music, I'd have to spend a little more time with the manual (Ugh.) Another hour and forty-five minutes later, I felt as though "Row, Row, Row Your Boat" would never take the place of Star Raiders. I even tried composing a few simple tunes, with little success. Maybe I could bring it back to the store where it was purchased and explain to the sales person that my wife had already bought one for me. I decided to sleep on it and give my musical sister a call the next morning. Perhaps someone with a background in music could figure it out for me.

She stopped over the following day, and with a little embarrassment I showed off the Row Row composition and explained how the program worked. She wanted to try her luck at it and asked for a request. I just happened to have the sheet music for Star Wars. She thought that perhaps the Star Wars theme was a bit too complicated for her first attempt, but she'd give it a try. She told me that it would take her quite a while to finish the whole arrangement, so I decided to do a few chores around the house. Well, about two hours later, she called back into the room and said "LISTEN". It was fantastic! I couldn't believe my ears. How did she do that?

It took a few days of practice and a lot of trial and error, but with a chart she drew and a few lessons on reading music, I felt as though I wasn't such a musical dummy after all.

The chart (figure 1) shows examples of note placements with their appropriate letter name: C, D, E, F, G, A, B, or R (rest), and octave (3 through 6). However, you must also include the note duration, (Whole, Half, Quarter, Eighth, Sixteenth, or Thirty-second note.) Also included is a listing of rests with their computer accepted abbreviations. The duration of a rest is equal to the duration of the note it replaces, i.e. an Eighth note and an Eighth Rest have the same duration. Accidentals (Sharps, Flats, or Naturals) are also important when composing or copying sheet music and may be part of the key signature at the beginning of every line of music, or written in front of the notes which are to be changed. The Sharp sign (#) raises a note, the Flat sign (♭) lowers a note, and the Natural sign (♮) contradicts (cancels) the effect of an Accidental Sharp or Flat in the same line preceding the Natural or in the Key Signature.

Musical sounds, or NOTES, are named after the first seven letters of the alphabet (A-B-C-D-E-F-G) after G, the note name starts again at A. After every eight notes there is another note with the same name. These notes are given the same names because they sound very similiar, in spite of being higher or lower than each other. All notes are not used for every instrument or voice. So to make it easier to read and understand, music is divided into two parts, one for higher voices and instruments, and the other for lower.

Signs called CLEFS tell us whether the music is for high or low voices and instruments. Normally two Clefs are used and one is shown at the beginning of every line of music. The Treble or G Clef is for the higher voices and instruments. The Bass or F Clef is for the lower. Most sheet music for piano, organ and other keyboard instruments use both Clefs together because they have such a wide range of notes. This type of sheet music is the type that you should look

for when you are considering using your ATARI to play the notes.

All notes are written on sets of lines and spaces called A Staff. There is one Staff for the Treble or G Clef and another for the Bass or F Clef. Each line and space on the Staff is like the rung on a ladder, one note on a line, and the next note higher in the space above, and so on. The higher the note is on the Staff, the higher it sounds. The Clefs help by giving us the position of one note. If you look at the G Clef you will notice that it draws a ring around the second line, which shows the position for the note G. Using the G note as a reference, it is easy to determine the positions of the other notes on the G Clef, remembering that the other notes run in order up the Staff. G is on the line, A is in the space above, B is on the next line and so on. The Bass or F Clef also gives us the position of a note, the F. This time the F note is always located on the fourth line. You will notice that the big dot on the F Clef symbol marks this position.

Notes have many different shapes. Each shape lasts for a certain number of beats which can be counted. A WHOLE NOTE lasts for four beats, which you would count 1-2-3-4, in time with the music. A HALF NOTE lasts for two beats (half as long as a Whole Note) and so on. To make counting easier, music is divided with vertical lines called BAR LINES. Bar Lines do not stop the beat. You should count as if they don't exist and are used to help separate the beats when counting. A DOUBLE BAR LINE marks the end of a piece of music, and can also divide music into sections or Phrases.

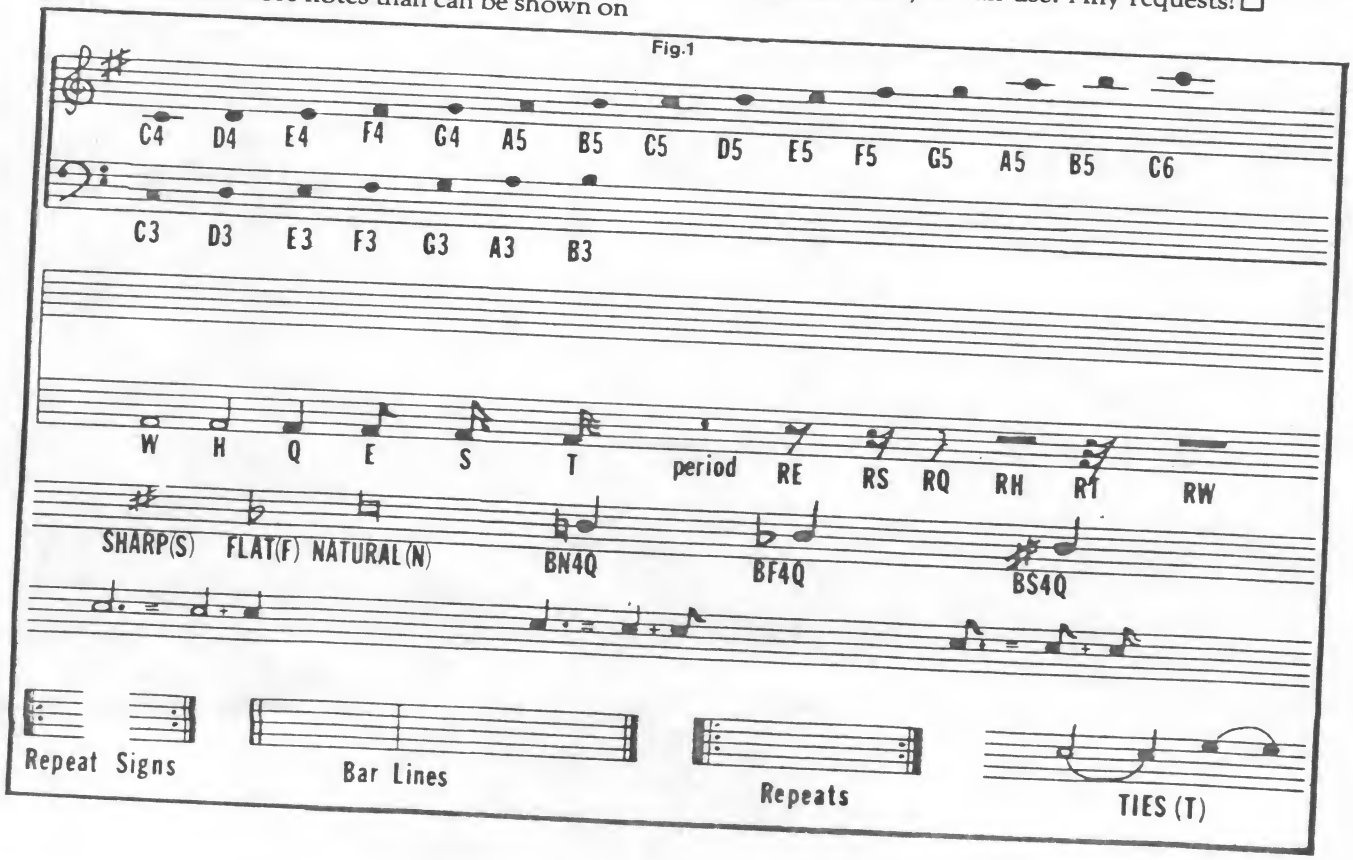
Most music has more notes than can be shown on the five lines and four spaces of the Staff. These notes are written in the areas above and below each Staff on short lines. These notes are worked out in exactly the same manner as the notes we have already discussed. After a while you will come to recognize these notes.

In most music, one or more of the instruments or voices are silent for a few beats. These silent beats are known as RESTS. Rests are counted in the same way as the notes they replace, i.e. a whole rest lasts as long as a whole note and has the same number of beats. Rests can be found at the beginning or end of music, or between the different Phrases of a melody.

When a note is carried on into the next bar, a curved line called a TIE is used. A Tie makes the first note longer by joining it to the note at the beginning of the next bar. Ties can also join two or more notes together in the same bar, and will make the first note last for the combined number of beats of the notes tied together. Ties will only work with notes that have the same name and position on the Staff with no different notes in between. Do not confuse a SLUR for a Tie. A Slur can be used over or under several different notes and means that those notes should be played smoothly.

I could devote this entire issue to the basics of music. However, the information we have covered so far should help most of you in getting started. If you need additional information, refer to the chart or the Music Composer manual. In future issues we will get into music a little deeper and explain what your ATARI is capable of. I will also have a few song listings that you can use. Any requests? □

Fig.1



Final Release Copy 4/6

AtariMusic™ I

Notes and Steps

AtariMusic™ II

Major Scales and Keys

Whether you're learning how to play a new instrument, planning to join the choir, or just trying to train your ear for music--the ATARI Music Learning Series can free the musical spirit in you! Whether you've purchased either AtariMusic I or AtariMusic II, the ATARI Music Learning Series uses the full musical powers of your computer, including its four programmable "voices" and full range of pitches. It's an exciting way to learn basic music theory.

From your first note to whole melodies, AtariMusic I and II let you HEAR music in rich full sound; SEE music in the form of notes and musical scales right on your TV screen; and even PLAY music by using your computer's joystick controller.

self-guiding set of programs. Instructions for moving through the programs appear right on your TV screen. Atari's Maestro Doowah Ditty will help guide you through the programs--the Maestro offers a few "Helpful Hints" on page XXXXX of this booklet.

It's important to go through the lessons in order and practice with each one, because each set of lessons in the series builds on previous ones.

At the start of each lesson, new musical concepts are explained and demonstrated on your TV screen. Then you "play" with those concepts. Next, you're given exercises that let you practice your new musical skills. At the end of each lesson, you're tested on what you've learned. These self-tests let you see how you're doing and where you need to improve.

Both lesson sets in AtariMusic I and the first lesson set in AtariMusic II end with an exciting musical video game. These games provide an opportunity to put all your musical skills together, and they're a great way to review what you've learned before going on.

You're guided through "Note Reading" and "Whole and Half Steps" in AtariMusic I.

In "Note Reading," you learn about the lines and spaces on a staff, ledger lines, the grand staff, and treble and bass clefs. Practice what you've learned with "Note Attack," a musical notation video game.

Once you've learned how to read notes, the second set of lessons in AtariMusic I, "Whole and Half Steps," introduces you to the steps between notes on the musical scale, and to the musical logic of the piano keyboard. You learn about whole and half steps, sharps and flats. Perfect what you've learned in AtariMusic I by playing "Stepwise Transporter," another exciting video game.

ATARIMUSIC II...

AtariMusic II builds on what you've learned in AtariMusic I. You're guided through "Major Scales" and "Hearing Scalewise Melodies in Major Keys."

As you begin AtariMusic II, explore the various major keys and scales with "Major Scales." Learn about the C major scale first, then the others. You also learn to name and write key signatures. Finally, try your hand at the musical game, "Key Wars."

In the final set of lessons, break free as you start training your ear to hear melodies in the major keys. With a number of ways to respond in this lesson set--all explained on your TV screen--you learn to name notes using the piano keyboard, letter names, scale-degree numbers, or solfeggio syllables (DO-RE-MI).

Use the Lesson Checklist at the end of this guide to keep track of your progress through the lessons. And refer to the Glossary of Musical Terms for definitions of all the terms used in AtariMusic I and II.

Box out At Top of Page:

AtariMusic I--
Cassette Side #1: Note Reading
Side #2: Whole and Half Steps

AtariMusic II--
Cassette Side #1: Major Scales
Side #2: Hearing Scalewise Melodies in Major Keys

If you have an ATARI 850™ Interface Module, make sure it's turned OFF during the loading process.

Here's how to load the AtariMusic I and AtariMusic II programs from cassette into your computer's memory.

You'll want to go through the ATARI Music Learning Series lessons in order at first. As you do this, write down the counter number shown on the program recorder before you load each lesson--there's a space provided in the Lesson Checklist. Then you can easily load any lesson you'd like to work with at any time, as explained in "Random Loading," xxxxx, and use the program with greater flexibility.

RUNNING YOUR PROGRAM FROM START TO FINISH

To load the first lesson on each side of a cassette:

1. Make sure your ATARI Home Computer is turned off. The cartridge slots should be empty.

2. Insert the cassette in your program recorder. Close the door on the program recorder and REWIND the tape to its beginning. Reset the counter on your program recorder to zero by pressing the counter reset button.

3. Turn on your computer while holding down the START button on the computer. You'll hear a "beep" sound.

4. Press PLAY on the program recorder, then press the RETURN key on the computer. Your computer will load the first lesson on the cassette tape and you'll see the AtariMusic main selection menu.

Sequential Loading of Subsequent Lessons:

To go on to the second and subsequent lessons on a cassette:

1. If you've successfully completed a lesson, you'll be directed to "Refer to the manual for how to do a sequential load." Write down the counter number to mark the beginning of the next lesson and skip to step 2. Otherwise, you must first choose the next lesson from the main menu by pressing SELECT until the next lesson is highlighted. (Remember to write down the counter number.) When you press START to begin, you'll be directed to "Refer to the manual for how to do a sequential load."

2. To load the lesson into your computer, make sure the PLAY button is pressed down on your program recorder. Press RETURN and the computer will make a "beep" sound. Press RETURN again and the lesson will begin loading into the computer.

Random Loading--Picking up where you left off

Once you've gone through AtariMusic I or II and written down the counter numbers on your Lesson Checklist, you can load any lesson in the programs by following these instructions:

1. If you're already working with AtariMusic I or II--with your computer turned on and a lesson loaded from the appropriate cassette--skip to step 2 below. Otherwise, follow the instructions under "RUNNING YOUR PROGRAM FROM START TO FINISH" to load the first lesson on the cassette you want to work with into your computer, then proceed to step 2 below.

2. When you see the main menu on your screen, select the lesson you want to work with. When you press START, you'll be instructed to "Refer to the manual for how to do a random load."

3. Press ADVANCE or FAST FORWARD on the recorder to reach the counter number that corresponds to the lesson you want. When the tape has advanced to the counter number of the lesson you want, press STOP.

4. Press PLAY on your program recorder, then press the SELECT key on your computer. You'll hear the lesson title and a countdown from 5 to 0. Press the SELECT key again when you're instructed to "Stop!"

5. Now press RETURN and your computer will make a "beep" sound. Press RETURN again and the lesson you've chosen will load into the computer's memory.

Please note that if you press the SYSTEM RESET or BREAK keys, the program must be reloaded.

Box Out at Top of Page:

AtariMusic I--
Diskette #1: Note Reading
Diskette #2: Whole and Half Steps

AtariMusic II--
Diskette #1: Major Scales
Diskette #2: Hearing Scalewise Melodies in Major Keys

Here's how to load the AtariMusic I and AtariMusic II programs from diskette into your computer's memory.

To load the AtariMusic I or AtariMusic II programs using one disk drive:

1. Turn off the computer.

2. Turn on your disk drive and wait for the BUSY light to go out.

3. Insert the diskette in the disk drive. Close the disk drive door or latch, then switch on your computer. You'll hear a whirring noise as the program loads into the computer. Then the ATARI Music Learning Series title screen appears.

To load the AtariMusic I or AtariMusic II programs using two disk drives:

1. Turn off your computer.

2. Turn on both of your disk drives and wait for the BUSY lights to go out.

diskette #2 in drive 2. Close the disk drive doors or latches, then switch on your computer. After the program is finished loading, the ATARI Music Learning Series title screen appears.

The ATARI Music Learning Series is designed to let you go at your own pace through the lessons. To skip ahead or review, follow the instructions at the bottom of your screen. Press DELETE BACK S to go back to previous screens. Pressing ESC will take you back to a lesson menu.

Once you've gone through a lesson, you'll probably want to review it often so you can recognize notes, steps, major scales, and key signatures faster. The musical video games are also a great way to learn how to read music more quickly.

To remember where the musical alphabet goes on the musical staff, you might find it helpful to memorize these phrases: [Graphic of grand staff with FACE, Every Good Boy Does Fine, All Cows Eat Grass, and Good Boys Do Fine Always.]

During the drills, the program continues asking you questions about the concepts in the lesson until you press RETURN. Once you think you've mastered a concept, just press RETURN to continue.

When you're playing Stepwise Transporter, a "W" or "H" appears on the space shuttle each time you move your cargo note up or down the staff. This is a cue to move your cargo note either a whole or half step up or down the transporter beam--so pay close attention!

"Hearing Scalewise Melodies in Major Keys" in AtariMusic II is the most difficult--and longest--of all the lessons in AtariMusic I and II. Play the melodies over as many times as you need to by pressing P on your computer keyboard. Or change the speed by pressing T for "Tempo," so you can hear every note clearly.

Bass Clef.(Illustration) The sign at the beginning of the staff that's used for low notes. It's also called the F clef because it indicates F below middle C.

Clef. A sign at the beginning of a staff that determines the position of the notes.

Enharmonic. Two ways of naming the same pitch or tone. For example, C♯ and D♭ are enharmonic.

Flat. The flat, ♭ , takes a pitch down a half step. For example, G♭ is one half step lower than G.

Grand Staff.(Illustration) When joined together, a staff with a treble clef and a staff with a bass clef make a grand staff, with middle C in between.

Half Step. (Illustration) Two keys directly next to each other on the musical keyboard are a half step apart in pitch.

Keyboard. (Illustration) A musical keyboard has white keys and black keys. The black keys are arranged in groups of two and three between the white keys. Each key produces a different pitch.

Key note. The first note in a scale.

Key Signature. The sharps or flats in a scale. The key signatures for the major scales shown at the top of the page are highlighted in blue.

Ledger Line. (Illustration) A short line used to write notes above or below the lines of a staff.

Major Key. The first note in a major scale is the major key.

Major Scale. (Illustration) A scale that rises up in whole and half steps in the order W--W--H--W--W--W--H.

Melody. A specific sequence of pitches (or notes) which is the main tune that a song is built around.

Middle C. (Illustration) A note written on the first ledger line below the staff in the treble clef or on the first ledger line above the staff in the bass clef.

Musical Alphabet. (Illustration) Notes are named with the letters A through G. Each letter has its place on the musical staff.

Note. (Illustration) The symbol for a pitch written on a staff.

Pitch. The highness or lowness of a sound. High pitches are located on the upper staff and low pitches on the lower staff.

Scale. A ladder of pitches that goes up or down in a specific combination of whole and half steps on the musical keyboard or staff.

Scale Degree Numbers. In major scales, notes are numbered in order from 1 through 7 beginning with the key note.

Scalewise Melody. A melody that follows the notes of a scale in sequence; the notes in a scalewise melody always go up or down in order of the scale.

Sharp. The sharp, ♯ , takes a pitch up a half step. For example, G♯ is one half step higher than G.

Solfeggio Syllables. DO, RE, MI, FA, SO, LA, and TI are solfeggio syllables. They can apply to any major scale. The key note is labeled DO, and the rest of the notes follow up the solfeggio scale in order from there.

Staff. (Illustration) A kind of chart, with five lines and four spaces, on which music is written.

Tempo. The speed at which a melody is played.

Treble Clef. (Illustration) The sign at the beginning of the staff that's used for high notes. It's also called the G clef because it indicates G above middle C.

Whole Step. (Illustration) On the musical keyboard, two keys with another key in between are a whole step apart.

If you're using AtariMusic cassettes, write down the counter number at the beginning of each program lesson in the space provided. The first lesson in each of the lesson sets automatically loads into the computer, so its counter number will always be 000. Finally, write down the date and score each time you pass a lesson test.

ATARI MUSIC LEARNING SERIES

LESSON CHECKLIST

Atari Music I

	Cassette Counter #	Test Date/Score
Note Reading		
Lines and Spaces.....	000	
Test on Lines and Spaces.....	XXXXXXXXX	
Treble and Bass Clefs.....		
Treble Clef Test.....	XXXXXXXXX	
Bass Clef Test.....	XXXXXXXXX	
Ledger Lines.....		
Treble Ledger Test.....	XXXXXXXXX	
Bass Ledger Test.....	XXXXXXXXX	
The Grand Staff.....		
Grand Staff Test.....	XXXXXXXXX	
Note Attack		

	Cassette Counter #	Test Date/Score
Whole and Half Steps		
Letters on the Keyboard.....	000	
Test on White Keys.....	XXXXXXXXX	
Steps Between Letters.....		
Whole and Half Step Test.....	XXXXXXXXX	
Sharps and Flats.....		
Test on White and Black Keys.....	XXXXXXXXX	
Steps with Sharps and Flats.....		
Whole and Half Step Test.....	XXXXXXXXX	
Making Steps on the Staff.....		
Whole and Half Step Test.....	XXXXXXXXX	
Stepwise Transporter		

LESSON CHECKLIST

Atari Music II

	Cassette Counter #	Test Date/Score
Major Scales		
The C Major Scale.....	000	
Test on the Order of Steps.....	XXXXXXXXX	
Major Scales in Other Keys.....		
Test on Making Major Scales.....	XXXXXXXXX	
Naming Key Signatures.....		
Test on Naming Keys with Sharps....	XXXXXXXXX	
Test on Naming Keys with Flats.....	XXXXXXXXX	
Writing Key Signatures.....		
Test on Writing Key Signatures.....	XXXXXXXXX	
Key Wars		
Hearing Scalewise Melodies in Major Keys.....		
Instructions and Options.....	000	
Drills and Goals.....		

Drill #	1	2	3	4	5	6	7	8	9	10	11	12	13
Date Completed													

AtariMusic I and II were developed by Dr. Fred T. Hofstetter, Professor of Music and Educational Studies and Founding Director of the Office of Computer -Based Instruction at the University of Delaware. Dr. Hofstetter has pioneered various applications of computers to music instruction.

(Atari Logo)

ATARI®

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(Part number and Rev.)

Carolyn Pugh — Music

Autobiographical Music

A B C D E F G H

Assign sounds to different letters than usual letters in the musical alphabet

FORMS – ABA

TERNARY form

A is a theme

B is a contrast

Composition with Recurring Themes

RONDO form

A B A C A D ... A

A is one theme

B C D etc one others

Possible Themes

NAME THEME

PHONE NO. THEME

Birthday Theme (Play Happy Birthday + write Birthday on screen)

Address Theme (Draw a house)

Combine Nos. Letters to produce tones

Favorite Color

Suite — Collection of Things that have some connection

Name Suite — collection of Rondos + Ternaries

Intro. to Suite

Rhythmic Series — Standard

1 SI 2 are similar or same
3 NO is different
4 B is final point (Ending)

Example

ROBERT (2 syllables)
LINDA (2 syllables)
Caroline (3 syllables)
Wayne (1 syllable)

} Rhythmic Pattern —

↓
Notes aren't as important here — timing is!

Simulation of Hand Bells

Orchestration Have tape Recorder count beats/measure

Write program to allow kids to play only two notes at each machine.

Orchestrate Roomfull of machines — as if they were hand bells

Music Composer

Ostinato – Repeated rhythmic tonal drone
Don't show the drone notes,
show the melody
Possibly several ostinatos available
to try out with melody lines

Burdun – (Name of a drone bass)

Rounds and Cannons

Tape Recorder Sync — Hall of Mountain King

① Show words
- Mythical and Magical
- Musical Arrangement
- Mythical and Magical
- Musical Beat

Change Background colors

② Kid draws mountains with Joystick in time to the Music

③ Take a "dwarf" and move him around

④ Play a ~~Heavy Metal~~ Rock version of the Mountain King + ~~participation~~ have computer ask kids questions comparing 2 versions

---

Harmony: Sing along program

Notes from Meeting with
Carolyn Bush

Using the seven notleletters and H from the German musical scale, and assigning a trill (2 notes repeated quickly), a Glasando (up or down like running fingers up or down the keyboard), a chord (more than one note played at a time) or random notes will be given to the remaining letters.

Using camper's name and assigning notes to each of the letters they will develop a teranery form of music. (A B A) In other words, each camper will develop two musical pieces using the letters of his/her name. The first plays, then the second, then the first.

At the time these are playing the camper's name will also appear on the video monitor in some graphic form. A different form for each musical piece.

Next assigning the numbers of each camper's phone number with pauses that match the camper's normal way of saying their phone number, will be used to make a musical piece. This will be combined with the previous name music to make a Rondo. A rythum of AB AC ABA (a recurring theme)

Third using the camper's birthdate have it appear on the screen with Happy Birthday To You playing, (with a graphic cake possibly)

Fourth using favorite colors have colors flashing on the screen with music using the spelling of the colors.

Fifth using the camper's address to music also draw a house.

As a class project combine these efforts into a Suite (series of several different selections with one theme)

All of the class share each camper's rondos and teranerys. Suite Instroduction: Arithmetic series 4 measures.

first 2 similar or same pieces

third is the most complicated piece

fourth is finai point.

example: Rob ert (any notes may be used/only interest in the rhythum Lin da Car o line Wayne

Hand Bells and computers Teach kids what their note looks like on the scale. Program to play only two notes at each maching.

Color and note Run program

What is your name?

What note will you play?

Ostenatos (are used with drone notes) With music composer - don't show drone notes, but show melody.

Melodies - petatonic===Canons and rounds preprogrammed round and start at once.

Harmony-give melody that requires only two chords/mark where chord change. Give paper with chords on them-Tonic and dominate.

Use the comouter as an aid to listening. Using Hall of the Mountain King (mythical and magical, musical animals, mythical and magical musical beasts) change background colors. Recorded on tape (music) with words appearing on screen in rythum.

Listen once and then using joy stick draw mountains in time to music.

Next dwarf will dance around on screen in time to music-on mountains kids have drawn. (perhaps increase in size as music increases)

Rock version available by Electric Company

INTRODUCTION TO SOUND

LOAD D:SOUNDEMO (To LOAD a program from the disk - insert disk into drive [if drive is off turn on drive, then turn on computer], first type NEW and press the RETURN key, next type LOAD "D:SOUNDEMO and press the return key.)

You will be experimenting with sound and the computer. The program that you have LOADed into the computer has several modules preprogrammed for you to use.

To use these modules you must give the computer a command that will assign a length of time for each note to be held. This is done by using the Compute command which will assign a length of Time for the PAuse. The procedure is as follows: C:#T= any number may be added to this equation, try 12 to start.

Using the immediate mode try the following:

```
C:#T=12
U:*UP
U:*PONY
U:*TRILL
```

Now try these other sounds:

```
*UPDOWN
*RONI
*CHEESE
*DOWN
*TUNA
```

Put several modules together in a short program.

For example:

```
10 C:#T=12
20 U:*UP
30 U:*TRILL
40 U:*DOWN
RUN
```

Try changing the tempo like this:

```
10 C:#T=7
```

Try other numbers for tempo.

ATARI / CLUB MED

MUSIC WORKSHOP

Music Composition Activity

Purpose:

Participants in this activity study music composition by exploring the effects of arranging musical phrases in varying orders. Changes in volume, tempo, key, and tone quality can also be explored.

Activity:

1. Have each participant load the COMPOSITION program in LOGO by typing LOAD "D:COMPOSIT.ION.

2. Each participant should then type COMPOSE and follow its instructions for arranging the four musical phrases it provides. It is not important to find the standard order for these phrases as the point of the activity is more to listen to the effect of different arrangements and create pleasing combinations of ones own. Occasionally the music will be interrupted by LOGO while it does some internal housecleaning (called garbage collection.) These interruptions can be avoided by typing RECYCLE before entering a sequence of phrases.

3. After these phrases have been explored for a while participants should type EXPERIMENT. This will explore additional phrases and ways of changing the volume, tempo, key, and tone quality. These chenges can be made at any time. They can in fact be inserted in the middle of a sequence of phrases, thus making the change while the tune is being played. The volume, tempo, key, and tone can be reset to their initial values any time by typing COMPOSE. The additional instructions can be reviewed by typing EXPERIMENT.

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logo
SYSTEM logged out at 19-MAY-1983 18:20:56.50

Bob,

I've made the disks as you requested. Let me point out a few things. First, the "noise" disk is actually a program written by Ed Logg in the Coin-op division, and I have noted it as such on the label of each disk. To use it, after booting (or after hitting SYSTEM RESET), there are four commands available.

1) INIT will initialize all parameters to the preset value.
2) NOISE will run the actual noise program. Once in the noise routine, input is accomplished via the joystick, SELECT, and OPTION keys. To hear the sound designed, press START.
3) nn SSAVE will save one sound. nn is a number between 0 and 31 decimal. In order to save a sound, you must first design it using NOISE. Then hit SYSTEM RESET which is the only way to get out of the NOISE mode. Now enter the SSAVE command.
4) nn SLOAD will load one previously saved sound. After loading a sound, NOISE must be invoked to hear it. Notice that the disked may or may not be accessed when an SLOAD is performed. This is dependent upon whether or not the disk buffer containing that sound is in memory or not.

As for the Synthesizer disk, it is silent booting, and takes a LONG time to boot. Don't worry when it start gnashing and grinding on the disk drive, it is all part of the copy-guard scheme.

Good luck, and thanks

ed

Ed Rotberg